AMENDMENTS TO THE SPECIFICATION

Please replace the paragraph beginning at page 1, line 8, with the following rewritten paragraph:

The present invention relates to an optical imaging system and an optical imaging detection method for irradiating a low coherence light beam to an object and constructing a tomographic image of the inside of the object from information of light scattered or reflected from the object.

Please replace the paragraph beginning at page 2, line 10, with the following rewritten paragraph:

Aside from the above optical imaging system, for example, Japanese Patent Application No. 11-134590 has disclosed ~~other~~ another type of optical imaging system. This type of optical imaging system includes a rotational driving means, which rotates an optical scanner probe, and an advancement/withdrawal driving means, which advances or withdraws the optical scanner program in axial directions, so as to produce a three-dimensional tomographic image of an object.

Please replace the paragraph beginning at page 3, line 16, with the following rewritten paragraph:

On the other hand, the optical imaging system described in the Japanese Patent Application No. 11-134590 is a dedicated three-dimensional optical imaging system. The optical imaging system is therefore of little general-purpose. When an optical scanner probe other than a three-dimensional optical scanner probe is used in combination, it is hard to control the system and display images suitable to the probe therewith. Thus, the optical imaging system ~~is poor in~~ has low adaptability.

Please replace the paragraph beginning at page 5, line 1, with the following rewritten paragraph:

Furthermore, in the conventional optical imaging systems, [[a]] bandwidth is optimally adjusted by observing an object to be observed and by manually adjusting a bandwidth limitation filter. Every time a probe whose optical characteristics are different from a reference probe ~~references is replaced with another~~, or every time an object is observed using the same probe, [[a]] the bandwidth must be regulated. This is bothering.

Moreover, in the conventional optical imaging systems, a predetermined gamma is calculated in advance relative to an object to be observed. An actual gamma is corrected based on the calculated value. It is therefore necessary to acquire and adjust [[a]] the gamma every time an optical probe whose optical characteristics are different from a reference probe. ~~references is replaced with another. The~~ Attending to gamma control is labor-intensive. The conventional optical imaging systems include, for example, like the [[one]] system described in Japanese Unexamined Patent Application Publication No. 2000-75210, an optical imaging system having two scanners ~~thereof~~ driven to scan inputs while tracing a Lissajous figure. However, the optical imaging system described in the Japanese Unexamined Patent Application Publication No. 2000-75210 [[has]] does not ~~taken~~ provide measures against the conditions for driving the scanners, the details of an operating procedure, and imaging.

The present invention attempts to ~~break through~~ address the foregoing situations. An object of the present invention is to provide an optical imaging system and an optical imaging detection method capable of automatically detecting and identifying the characteristics of any of a plurality of types of optical probes.

Another object of the present invention is to provide an optical imaging system that automatically detects the characteristics of an optical probe (including a scanning technique, a focal point, and the diameter of a sheath) so as to control the probe optimally relative to the type thereof ~~of probe~~ or determine ~~a display form optimally thereto~~ an optimal display. Otherwise, the optical imaging system presents on a display image the information of the type of optical probe or of the characteristics thereof or enables designation of the information thereof.

Please replace the paragraph beginning at page 6, line 21, with the following rewritten paragraph:

The present invention provides an optical imaging system that irradiates light from a light source and constructs an observed image of an object using information carried by return light from the object. The optical imaging system ~~consists~~ mainly [[of]] comprises:

an optical probe, which is replaceable, [[that]] propagates the light emanating from the light source to the object, and receives the return light from the object;

Please replace the paragraph beginning at page 28, line 23, with the following rewritten paragraph:

Fig. 3 shows the relationship among connections. Push pins 46b (of each micro-switch 46) located to face projections 45a of each sensor pin 45 are pressed by the projections 45a. Consequently, switches [[46a]] 46ad connected to the push pins 46b are turned on.

Please replace the paragraph beginning at page 93, line 6, with the following rewritten paragraph:

Specifically, as shown in Fig. 44, an optical imaging system 100B of the fifth embodiment has a probe data database 151, which is constituted of a nonvolatile memory such as a hard disk drive (HDD), included in a control unit 135b. The probe data database 151 receives data concerning optical probes employed and saves it. When an input device 152 such as a keyboard is used to enter a numerical value, the data concerning the optical probe 101 is saved. Incidentally, data may be copied from any other storage means such as a floppy disk ~~(registered trademark)~~ into the probe data database 151.